

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017993**Date Inspected:** 09-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Tian lei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder( OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

BAY- 2

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 07290.

**Magnetic Particle Testing (MT)**

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated MT report for this date. The members are identified as OBG Vertical plate weld Components. Total number of welds MT Tested: 8 No's. The weld designations are review as follows:

1. VP3015-001-003,005,006,007,014,016,017,018.

This QA Inspector Randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) of weld joint FB3343-001-180. Welder is identified as 066912. ZPMC Quality

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Control (QC) is identified as Mr. Zhulin. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC-U4c-F.

FCAW of weld joint FB3343-001-249. Welder is identified as 066734. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC-U4c-F.

FCAW of weld joint FB3343-001-238. Welder is identified as 066236. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC-U4c-F.

### BAY- 3

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 07285.

#### Ultrasonic Testing (UT)

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Floor beam weld Components. Total number of welds UT Tested: 4 No's. The weld designations are review as follows:

1. FB3286-001-089,137,075,151.

FCAW of weld joint FB3286-001-291. Welder is identified as 055491. ZPMC Quality Control (QC) is identified as Mr. Zhan yaxu. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4b-F.

FCAW of weld joint FB3286-001-368. Welder is identified as 067876. ZPMC Quality Control (QC) is identified as Mr. Zhan yaxu. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4b-F.

FCAW of weld joint FB3286-001-018. Welder is identified as 064949. ZPMC Quality Control (QC) is identified as Mr. Zhan yaxu. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4b-F.

FCAW of weld joint FB3286-001-343. Welder is identified as 052696. ZPMC Quality Control (QC) is identified as Mr. Zhan yaxu. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4b-F.

This QA Inspector performed photo documentation on Lift 14 Hinge plates identified as FB3286A and FB3343A located in sub assembly bay 2 and 3. These photos has been sent to QA lead Inspector and Structural Material Representative (SMR) by mail.

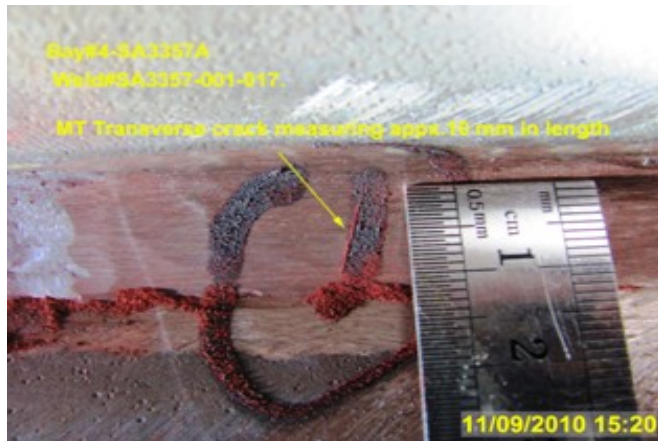
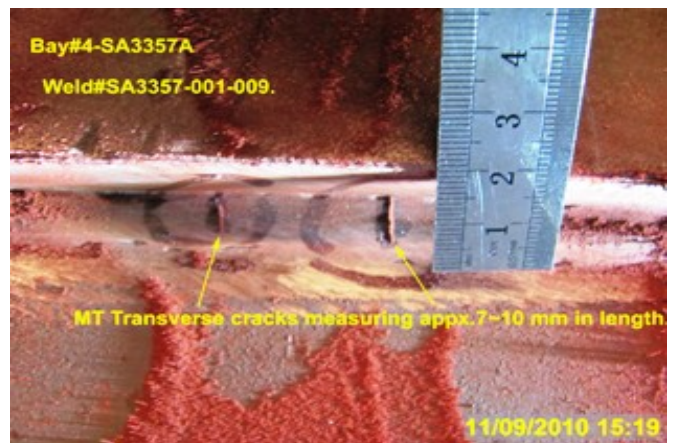
### BAY- 4

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ZPMC Quality Control (QC) MT Technician was performing Magnetic Particle Testing (MT) for the Longitudinal diaphragm sub assembly weld joints are identified as SA3357-001-009 and 017. This QA Randomly witnessed the MT. During random witness of MT this QA observed ZPMC QC MT Technician found Two (2) and One (1) Transverse linear cracks measuring approximately 7 mm ~10 mm in length Respectively. The welds are fillet welds. The “Y” locations for these cracks from nearest end of the weld measured to be approximately 90,110 and 2620 mm respectively. This QA informed to ZPMC QC identified as Mr. Zhang yaxu and American Bridge/Fluor (AB/F) QA Inspector Mr. Chen ji wei. Mr. Zhang yaxu and Mr. Chen ji wei informed this QA that the Cracks would be corrected in a manner compliant with the contract documents. Refer the attached photos for further information.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Prabhu,Surendra

Quality Assurance Inspector

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**Reviewed By:** Hall,Steven

QA Reviewer